3.0 WATERSHED ISSUES, CONCERNS, GOALS, AND OBJECTIVES

Information was gathered from a variety of sources to identify issues, problems, and concerns associated with environmental health and protection of beneficial uses in the Dominguez Watershed. Collectively, these issues served as the foundation for developing the goals and objectives that will guide the implementation of this WMMP. Coordination with stakeholders of the watershed was critical to this process, not only to ensure that the identified issues and objectives were representative and comprehensive, but also to initiate the public involvement that will need to be an integral part of the successful implementation of this plan.

This section is organized in three subsections. Section 3.1 describes the stakeholder coordination process. The issues and concerns, and methods used to gather this information, are presented in Section 3.2. In addition, the issues and concerns considered to be most important by stakeholders are identified in that section. The goals and objectives are presented in Section 3.3, and the objectives that stakeholders recommend should have the highest priority for watershed management are identified.

3.1 Stakeholder Coordination

This WMMP was prepared in coordination with stakeholders of the watershed. The DWAC was instrumental in ensuring coordination with a diverse group of stakeholders that was facilitated by its regularly scheduled meetings. Stakeholder coordination also included focused workshops with staff from local jurisdictions and non-governmental organizations, and public outreach meetings. These different types of coordination are described further below.

3.1.1 The Dominguez Watershed Advisory Council

The DWAC, which consists of stakeholders from governmental agencies, non-governmental organizations, industry, and the local community, formed in 2001 to guide the development of this WMMP. Founders of this group prepared an application and obtained a Proposition 13 grant, which was used to help fund the development of this WMMP. The DWAC was formalized following the application for the grant.

Stakeholder involvement in the DWAC is solicited by letters of invitation, word of mouth and an internet presence. Stakeholders remain involved in the DWAC because of the group's commitment to proactively address the issues of concern in the watershed through a consensus-based approach.

The DWAC meets on a monthly basis, and the focus of these meetings to date has been the establishment of a vision, mission, and charter for the group; and the development of goals, objectives, programs and projects for the watershed and the WMMP. The meetings are open to the public, and DWAC posts their meeting agendas and meeting minutes on the Dominguez Watershed website maintained by the LACDPW (http://ladpw.org/wmd/watershed/dc).

3.1.2 Focused Workshops

The following focused workshops were held with members of DWAC and/or representatives from local governmental agencies and non-governmental organizations during the preparation of this WMMP:

- The Water Research Committee of DWAC met to identify and discuss water related issues, concerns, and goals for the Dominguez Watershed.
- The DWAC, U.S. Department of Energy (USDOE), and the Western States Petroleum Association (WSPA) coordinated a TMDL workshop to discuss innovative stakeholder processes and tools that may improve the manner in which TMDL development and implementation is carried out for the Dominguez Watershed.
- A focused workshop was held with representatives from local jurisdictions to discuss potential programs and projects for watershed improvement.

3.1.3 Public Outreach

Two forms of public outreach have been conducted during preparation of the WMMP. Public meetings were held to discuss development and content of the WMMP, and the DWAC participated in organized watershed clean up and Earth Day events.

Two sets of meetings were held with the general public in January 2003.
The purpose of these meetings was to:

- Inform the public about the development of the WMMP.
- Review the study approach for preparation of the WMMP.
- Identify the issues, problems, and concerns associated with the Dominguez Watershed.
- Review the goals and objectives for the WMMP.
- Discuss proposed programs and projects to address impairments, protect beneficial uses, and enhance/restore habitats.
- Identify priority actions for the watershed.
- Discuss the importance and opportunities for public involvement in the implementation of the WMMP.

A variety of notification strategies were used to inform and invite the public to the meetings. The 200 largest businesses of the watershed were notified of the meetings by a letter of invitation from the DWAC. An announcement and agenda were posted on city and county bulletin boards, and the South Bay Calendar website. Announcements were posted at city halls, community centers, and libraries. In addition, the meetings were publicly noticed in four local newspapers (The Daily Breeze, the California Crusader, the Press Telegram, El Economico), and a monthly newsletter of the Sierra Club. A notice of the workshops also was publicized on the Los Angeles City View Channel 35. Table 3.1-1 lists the stakeholders that attended the public meetings. The DWAC members that participated in the development of this WMMP are listed in Section 5 (Preparers and Contributors) of this document.

Table 3.1-1. List of participants in the Dominguez Watershed January 2003 public workshops.

Stakeholders Attending Public Workshop
Local Government
Cabrillo Marine Aquarium, City of Los Angeles
City of Carson
City of Carson Environmental Committee
City of Carson Planning Commission
City of Inglewood
City of Los Angeles
City of Los Angeles, Mayor Hahn's office
City of Torrance
Coastal San Pedro Neighborhood Council
Department of Neighborhood Empowerment (DONE)
Ken Malloy Harbor Regional Park, City of Los Angeles
Los Angeles County Department of Public Works
Port of Long Beach
Port of Los Angeles
State and Federal Agencies
Assembly member Alan Lowenthal's office
California Coastal Conservancy
California Conservation Corps
Department of Water Resources
Los Angeles Regional Water Quality Control Board
Southern California Wetlands Recovery Project
Non-Governmental Agencies
Audubon Society, Palos Verdes South Bay
Conoco Phillips
Delthorne Homeowners, Torrance
Diversified Services for Youth
Dominguez Watershed Advisory Council (DWAC)
West Basin Municipal Water District
Wilmington Coalition for a Safe Environment
Residents
City of Carson
Harbor City
City of Inglewood
City of Lomita
City of Los Angeles
City of Rancho Palos Verdes
San Pedro
City of Torrance
Wilmington
Consultants
Lawrence Livermore Laboratory
Kleinfelder
MEC Analytical Systems, Inc.

Each set of public meetings was held in different locations of the watershed to solicit input from stakeholders across the watershed. The first set of public meetings was held at the Inglewood Public Library, Torrance High School, Carson Community Center, and Banning's Landing Community Center located in Wilmington. Half of these meetings were held in the afternoon and the other half in the evening. Approximately 80 people participated in these meetings. Three of the meetings were largely attended by adults, whereas the meeting at the public library mainly attracted students after school.

The other form of public outreach included organized clean up days and Earth Day events within the watershed. Members of DWAC participated in clean up days organized by community organizations and local jurisdictions in 2002 and 2003 for areas within the Dominguez Watershed. Members of the DWAC also participated in Earth Day events in 2002 and 2003 to increase awareness and stewardship for the watershed. Earth Day events, which included clean up activities and/or educational outreach were conducted at Harbor Park in 2002, and Harbor Park, Cabrillo Aquarium, and Wilmington Drain in 2003. A "Keep America Beautiful" clean up was conducted by 28 organizations in San Pedro, which included representatives from DWAC. In addition, British Petroleum (a DWAC member) conducted an e-waste roundup of electronics, television sets, computer parts, small appliances, etc. within the watershed. These public events were well attended and over 65 tons of trash were picked up and either recycled or properly disposed.

3.1.4 Questionnaires

Questionnaires were prepared and submitted to representatives of each city, the county, and ports within the watershed to solicit information on existing watershed management procedures, watershed problems, unmet needs, enhancement and restoration opportunities, and stakeholder goals. These types of background information were solicited for water resources, hydrology and hydraulics, biological resources, and land use issue areas.

3.2 Issues and Concerns

Issues and concerns for the watershed were identified from the following six sources of information:

- Los Angeles Regional Water Quality Control Board.
- DWAC meetings.
- Focused stakeholder workshops.
- Public outreach.
- Questionnaires submitted to local jurisdictions.
- Results of the watershed study.

The issues and concerns from each of these sources are given in the following subsections, and a summary of the key issues and concerns are presented at the end of this section.

3.2.1 Los Angeles Regional Water Quality Control Board

The LARWQCB (2001c) Watershed Management Initiative Chapter listed the following as significant issues for the Dominguez Watershed.

- 10 major discharges: one POTW, 2 generating stations, and 6 refineries.
- 58 minor permits.
- 62 discharges covered by general permits.
- Industrial storm water – 424 discharges.
- Construction storm water – 115 discharges.
- Historical deposits of DDT and PCBs in sediment.
- Discharges from POTW and refineries.
- Spills from ships and industrial facilities.
- Leaching of contaminated groundwater.
- Stormwater runoff.
- Impairments: metals, PCBs, PAHs, historic pesticides, coliform, trash, nitrogen.
- Currently scheduled TMDLs: (see Table 2.3-9 and page 2-90).

In addition to the impairments listed above as significant issues, the LARWQCB (2001c) also noted the other 303(d) listed impairments for the watershed, including odors, algae, eutrophic conditions, benthic community effects, and beach closures (see Table 2.3-9 in Section 2.3 for the complete list of 303(d) listed impairments for each water body within the watershed).

Another important issue discussed by the LARWQCB (2001c) is the development of a watershed-wide monitoring program to provide data for a State of the Watershed Report and TMDL development. The monitoring program would be part of the Surface Water Ambient Monitoring Program (SWAMP), which is being implemented to:

- Identify specific problems preventing the SWRCB, RWQCBs, and the public from realizing beneficial uses in targeted watersheds.
- Create an ambient monitoring program that addresses all hydrologic units of the State using consistent and objective monitoring, sampling and analysis methods; consistent data quality assurance protocols; and centralized data management.
- Document ambient water quality conditions in potentially clean and polluted areas.
- Provide the data to evaluate the effectiveness of water quality regulatory programs in protecting beneficial uses of waters of the State.

The SWAMP will be implemented following a rotating watershed cycle whereby each watershed is sampled every 5 years. The Dominguez Watershed is being sampled during the 2003/2004 cycle, with samples collected from upper and lower Dominguez Channel, Los Angeles and Long Beach Harbors, Machado Lake, and Madrona Marsh.

3.2.2 DWAC Meetings

Nearly monthly meetings have been held by the DWAC since that organization was formed in 2001. Stakeholders communicated the following issues and concerns at those meetings.

- Degraded water quality:
  - 303(d) listed impairments.
  - Trash/Debris.
  - Homeless encampments.
  - Multiple storm drain outfalls.
  - Aerial deposition.
- Degraded and limited natural habitat and biological resources.
- Brownfields.
- Flooding.
- Limited local water supply:
  - 70% of watershed is impervious.
  - Most storm water lost to ocean.
  - Import 2/3rds of water.
  - Need to increase water conservation and water recycling.
- Limited open space.
- Current monitoring insufficient for understanding sources of pollution, habitat quality, resource utilization, and overall health of watershed.
- Need science-based methods for water quality and environmental assessment, and TMDL development.
- Need WMMP that provides guidance.
- Need for more public education and involvement.

3.2.3 Focused Stakeholder Workshops

A focused meeting was held (November 7, 2001) by DWAC with the expressed purpose of identifying issues, concerns, problems, and goals for the Dominguez Watershed. Meeting participants were divided into four groups that were asked to identify negative and positive trends that currently affect watershed management applicable to the Dominguez Watershed (Table 3.2-1). The negative trends represent issues of concern for the watershed. The positive trends illustrate activities that should assist with watershed management planning and/or implementation.

Table 3.2-1. Stakeholder identified negative and positive trends affecting watershed management.

Issue	Group 1	Group 2	Group 3	Group 4
Negative Trends				
Bureaucracy (regulations, costs)		√		
Habitat degradation and loss	√	√	√	√
Inadequate public education regarding watershed impacts			√	
Illegal dumping			√	
Lack of coordination (monitoring, security issues)	√			
Lack of regulatory enforcement			√	
Lack of funding and/or cooperative funding	√			√
Lack of watershed husbandry	√			
Lawsuits/fines				√
Loss of river-side recreation (security, homeless use, mitigation concerns)				√
Over-watering of landscaping and yards				√
Population growth impacts (diminishing open space, congestion, traffic)	√	√	√	√
Water impairments	√			√
Positive Trends				
CEQA environmental controls	√			
Flood control			√	
Focus on multi-use improvements (open space, wildlife, recreation)		√		
Funding availability through grants	√			
Increased public awareness			√	√
Recognition of need for more open space	√			
Science-based goals and data collection		√		
Stringent regulations, TMDL requirements		√	√	√
SUSMP storm water runoff mandates	√			
Technology available to increase efficiencies of source control			√	√
Use of native species to reduce water use	√			

The Water Resource Committee of DWAC met August 20, 2002 to review the water cycle of the Dominguez Watershed. Meeting attendants agreed to break into four groups to identify issues and concerns and potential watershed management opportunities associated with the following four links in the cycle: water sources, runoff, permitted discharges, and use/reuse. Results of the meeting are summarized below according to the four water cycle topics.

1. Water Sources

   Issues and Concerns

   - Water supply allocation is insufficient for population demand.
   - Colorado River is over allocated and other water sources are limited.
   - Local aquifers are very deep, confined, and the West Coast Basin is overdrafted.
   - Groundwater quality is affected by seawater intrusion and pollution.
   - Conjunctive use of groundwater includes recharge from imported sources.
   - Recharge costs are expensive: seawater barrier $528 per acre-foot, spreading grounds $100 per acre-foot.
   - Few areas within the Dominguez Watershed are suitable for use as spreading grounds for surface recharge due to pressure conditions or aquitards above the aquifers.

- Most storm water is lost to ocean because the watershed is 70 percent impervious.
- Total dissolved solids concentration in imported water is a water quality concern.

Watershed Management Considerations

- Identify all areas within the watershed where recharge is possible; one potential location may be the quarry on the north side of Palos Verdes Peninsula.
- Use banked and stored water for drought protection.
- Manage West Coast Basin for drought conditions; fill during times of oversupply.
- Initiate discussions of retiring water rights (escrow/account).

2. Runoff

Issues and Concerns

- Storm water and urban runoff convey pollutants from streets and freeways that are automotive-related, industrial activities, sewage overflows, failing septic systems, fuel spills, firefighting retardants mixed with water, illicit discharges.
- Pollutants result from residential runoff associated with automotive repairs and leaks, yard waste, car washing, pavement washing, excessive irrigation, and pet waste.
- Pollutants may include runoff from large animals (racetrack, equestrian stables, and farms).
- Pollutant runoff is associated with construction activities.
- Pollutants are associated with harbor activities.
- Pollutants settle in waters from air pollution.
- Deposition of pollutants result in contaminated sediments.
- Pollutants Impact beneficial uses.
- Specific areas in the watershed experience flooding.
- Limited wetlands and natural attenuation areas are available to cleanse waters.
- Available land is limited to treat waters.
- Multiple co-permittees and multiple stakeholders occur in watershed with different priorities.
- Costs for achieving multiple goals will be high, and capital improvement funds are limited.

Watershed Management Considerations

- TMDL development needs to recognize challenges associated with understanding runoff water quality and modeling.
- Implementation, operation, and maintenance of BMPs will be important.
- The potential for end-of-pipe treatments should be considered.
- Runoff cleanup should include source controls, dilution, and treatment wetlands.
- Locate available land for creating treatment wetlands (potential location at intersection of 405 and Torrance lateral), and consider mosquito issue in wetland design.
- Develop strategies are needed that include different treatment alternatives, provision for flood control, and recreational opportunities.
- Development should consider land use planning.
- Gain funding partners and put agreements in place.

3. Permitted Discharges

Issues and Concerns

- Population growth and limited capacity of wastewater treatment plants.
- Sanitary sewer overflows.
- Dischargers are regulated by NPDES permit, Basin Plan, Clean Water Act, Municipal Storm Water and Urban Runoff Permit, and planned TMDLs.
- Waterways are dependent upon discharges and runoff.

- Site-specific objectives are needed if flood control channels are considered as "rivers".
- Should understand what occurs in mixing zones at outfalls and seawater/freshwater interface.

Watershed Management Considerations

- The potential for low flow diversion inputs to treatment facilities should be considered.
- Permitted dischargers should control releases until after peak storm flows in channel pass.
- Establish links between NPDES permitted discharges and environmental impacts and integrate results of the studies into regulation of the discharges.
- Available and allocated resource uses should consider costs and benefits.
- NPDES permit limits should consider available resources, allocation of discharge, technical feasibility, and cost/benefit ratios.
- The SWRCB is developing standards for effluent dominated/dependent water bodies.

4. Use/Reuse

Issues and Concerns

- Water purveyor coordination and cooperation are needed in distribution of recycled water.
- Negative public perception of water reuse for residential purposes needs to be addressed.
- Lack of infrastructure for water reuse needs to be addressed.
- Mandatory releases of treated water represents lost potential for water reuse.
- Water is lost due to leakage of old infrastructure of water supply and wastewater/sewage lines.

Watershed Management Considerations

- Increase effectiveness of public education about water reuse, imported water costs, recycled water testing results, and efficient water use. Use a uniform message about living responsibly in our watershed, and incorporate that into the immigration/naturalization program.
- Increase water reuse links to decrease dependency on imported water.
- Use recycled water as a water source to natural wetlands and created wetlands.
- Capture and reuse storm water at spreading grounds for groundwater recharge.
- Investigate the linkage between storm water and groundwater pollution.
- Capture and reuse storm water using cisterns.
- Increase permeable surfaces to promote groundwater infiltration by reducing asphalt (including playground areas) and implement Cool Schools program to infiltrate storm water.

3.2.4 Public Outreach

Several issues and concerns for the watershed were expressed by participants of the January 2003 public meetings. Members of the public also made several requests and suggestions regarding development of the WMMP. The issues and recommendations spanned ten major categories related to:

1. Drinking water quality.
2. Water supply.
3. Water quality.
4. Public health and safety.
5. Flooding.
6. Habitat protection and enhancement.
7. Recreation and aesthetics.
8. Outreach and education.
9. Funding watershed management.
10. Coordination with other planning and monitoring efforts.

Meeting attendees were asked to assign a high, moderate, or low priority to a set number of different issues, problems, or concerns identified in advance of the meeting. The pre-identified issues were developed based on input received during DWAC meetings and review of background information on the watershed. Additionally, meeting participants had the opportunity to write-in other issues not identified on the meeting handout and/or to verbally communicate issues and concerns during the public meeting. Results of this outreach are summarized in Table 3.2-2 and Figure 3.2-1.

Table 3.2-2. Summary of stakeholder-prioritization of issues, problems, and concerns at the January 2003 public meetings.

Issue, Problem, Concern	Priority			
	High	Moderate	Low	Top Ranked Issues
Degraded water quality in Dominguez Channel, Machado Lake, Los Angeles and Long Beach Harbors	√			√
Degraded and limited groundwater quality and supply	√			√
Limited and imported water supply	√			√
Majority of rainwater lost to ocean	√			
Flooding	√			
Erosion, sedimentation, and mudslides		√		
Trash on streets and in storm drains and channels	√			√
Illegal dumping	√			√
Recycling is difficult		√		
Minimal and degraded open space areas		√		
Invasive and non-native plants	√	√		
Limited access to water and open areas	√			
Homeless encampments	√	√		
Brownfields (contaminated properties)	√			
Watershed health is not strategically monitored		√		
Population growth	√			√
Traffic congestion	√			
Public education and involvement in watershed management	√			√
Write in:				
Safety/security to improve public willingness to conserve open space	√			
Greenway to ocean		√		
Recreation use/limited access channel (flood control)	√			
Enforcement of Environmental laws	√			
Contaminated material dredging in Consolidated slip	√			
Monitoring governmental agency violations	√			
Drinking water-wells	√			

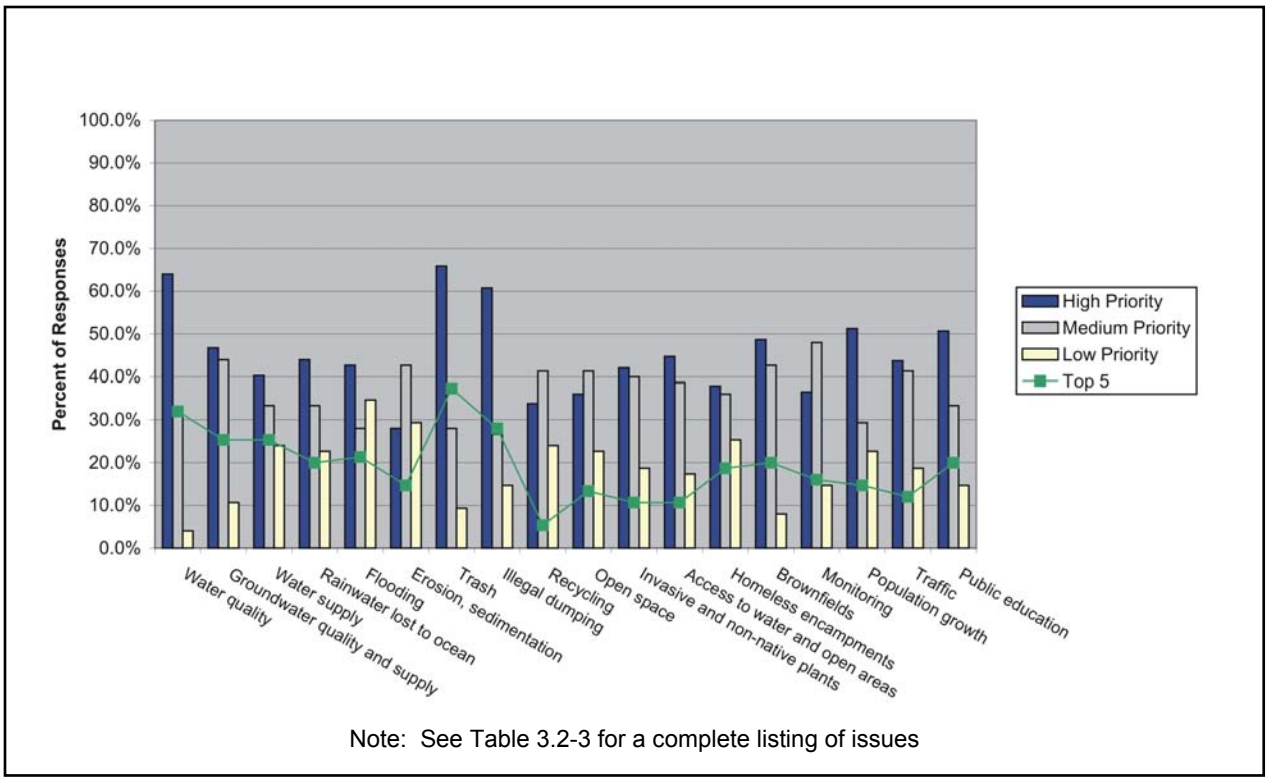


Figure 3.2-1. Prioritized issues and concerns identified at public meetings in January 2003.

The issues considered by the attendees of the public meetings to have the highest priority were, as follows:

- Degraded water quality in Dominguez Channel, Machado Lake, Los Angeles and Long Beach Harbors.
- Trash on streets and in storm drains and channels.
- Illegal dumping.
- Degraded and limited groundwater quality and supply.
- Limited and imported water supply.
- Population growth.
- Public education and involvement in watershed management.

In addition to comments, meeting participants identified locations of concern and/or potential project locations on an aerial photographic board of the watershed (Figure 3.2-2). The map locations were cross-referenced to a written description of the issue and/or concern (Table 3.2-3).

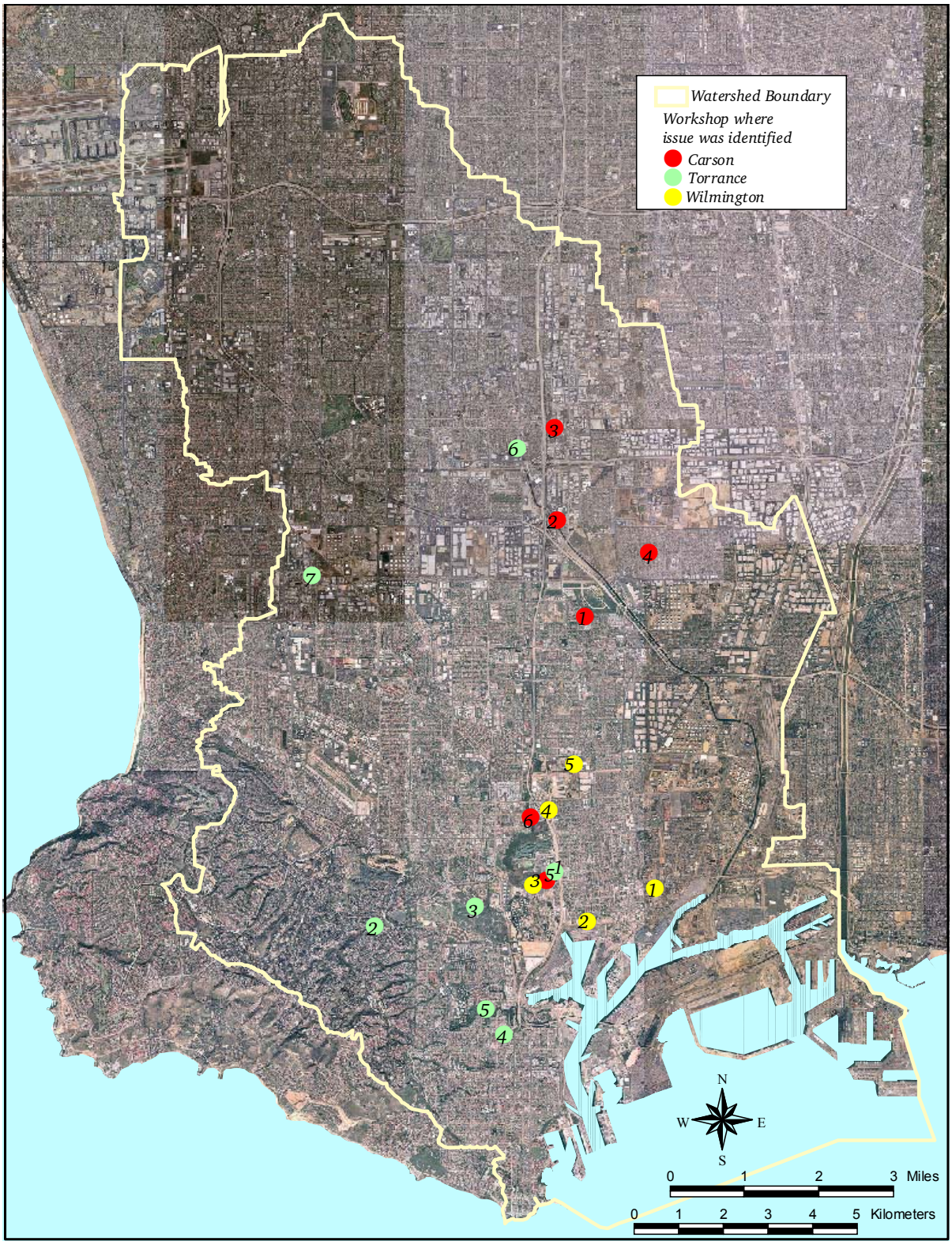


Figure 3.2-2. Locations of areas of concern and/or potential projects identified at public workshops in January 2003.

Table 3.2-3. List of issues and opportunities cross referenced to Figure 3.2-2.

Workshop	Map ID Number	Issue
Carson	1	Flooded Keystone neighborhood
	2	710 & 405 - Sepulveda – silt in channel
	3	Figueroa and 169th Street – illegal dump site
	4	Channel – illegal dumping in channel
	5	I Street wetland (Figueroa Place) south of Harbor College, East of Harbor Park – neglected wetland area, homeless encampment, biohazards, very trashy after rain, illegal dumping, trail in area needs maintenance for better and safer public access.
	6	Wilmington Drain in Harbor City – trash, homeless. It's a beautiful area worthy of restoration. There are so few of these sanctuaries left on this planet.
Torrance	1	Trees and parking lot of Harbor College – paper cups and trash when water comes into the trees is about 6 to 7' high, all plastic things go onto the trees that high.
	2	George F. Canyon – Rolling Hills, Palos Verdes north and Palos Verdes east across from Res. – key habitat area – water year round, representative of original riparian habitat, less impacted than Harbor Park. Attract Rolling Hills Estate via interpretative center/education opportunities.
	3	Wildlife corridor – habitat connections need daylighting through exit from Harbor Park to Harbor ??
	4	Open space right-of-way, potential education site adjacent to Oliver Street, Gaffey to Bandini.
	5	Between Peck Park and Leland Park off Gaffey – habitat management plan underway by Peck Park Advisory – important.
	6	Gardena Willows – east of extensive restoration efforts by City of Gardena – want interpretative center in upland area.
	7	Spence and Madrona (Torrance) – Del Thorne Park – every winter had 8 feet of water that is now pumped to sump and out to ocean. What can we do to keep the water and reuse?
Wilmington	1	Major abandonment refuse area, chemical dumping.
	2	East of Figueroa to Island between C Street and Harry Bridges Rd – Port has purchased property for road expansion – community wants land for recreational park and ecological development.
	3	Across street from Phillips/Tosco Oil Refinery, adjacent to Harbor Park – owned by Phillips/Tosco, land is contaminated, water (rain) runoff pollutes Machado Lake and sewage systems.
	4	760 W. Lomita Blvd., Harbor City – homeless encampment on Figueroa between Lomita and Pacific Coast Highway.
	5	Former site of Fletcher Oil Company in Carson north of Lomita Blvd., west of Main Street, south of Sepulveda – major contaminated site floods every year overflows to all neighborhood streets, sewer systems, and residences.

Meeting participants made the following suggestions relative to future public coordination and development of the WMMP.

- Make public presentations available online.
- Consider notification of future workshops with water bill.
- Make public presentations to smaller planning groups.
- Include maps of local water routes.
- Inform people about DWAC.
- Involve agencies in watershed planning.
- Trust Sierra Club and Audubon on nature and ecological issues.

3.2.5 Questionnaires

A questionnaire was submitted to the local jurisdictions to obtain their input on the key issues, problems, and/or concerns associated with Dominguez Watershed. Table 3.2-4 lists the identified issues. The top three issues and concerns were, as follows:

- Creation of open space.
- Water quality.
- Flooding.

Table 3.2-4. Major issues and concerns identified by jurisdictions for the Dominguez Watershed.

Jurisdiction	Poor Water Quality	Flooding	Erosion/ Sedimentation	Ground-water Pollution	Water Supply	Create Open Space	Habitat Restoration
Carson		X		X		X	
El Segundo					X		
Gardena	X			X		X	
Hawthorne				X	X	X	
Inglewood		X			X	X	
Lawndale		X				X	
Lomita		X					
Long Beach	X					X	X
Los Angeles (City)	X				X	X	X
Los Angeles (County)	X	X			X	X	
Manhattan Beach						X	
Redondo Beach	X	X				X	
Rolling Hills		X					
Torrance	X	X	X	X	X		X
Port Los Angeles	X		X				
Port Long Beach	NA	NA	NA	NA	NA	NA	NA
LARWQCB	X			X			X
Total	8	8	2	5	6	11	4

NA = not applicable
Note: Other issues of concern identified by some jurisdictions included lack of funding, sewer overflows, and traffic.

3.2.6 Results of Background Study

Several issues, problems, and/or concerns were identified during review of data and information used to prepare the Background Report (Section 2) of this document. These are organized by topic in the following subsections.

3.2.6.1 Land Use

Approximately, 91 percent of the watershed is covered by land and 93 percent of that is developed. Only 4.6 percent of land remains vacant, and new developments are planned for several jurisdictions. Conservation of open space is a problem for several of the jurisdictions within the watershed because of minimal guidance in their General Plans, and/or vacant land is so limited that there are few opportunities for conservation. Acquisition of property for conservation of open space has not been a common practice within the watershed. Jurisdictions generally rely on use of setbacks, buffers, and standards for common useable open space during review of new development and redevelopment projects as a means to conserve open space.

Land use issues and concerns that were identified from review of General Plans of jurisdictions within the watershed included the following:

- Clean up and development of brownfields.
- Conserve natural resources.
- Conserve natural canyons and hillsides for drainage control and wildlife habitat.
- Lack of transitions in land use.
- Lack of useable open space in multiple family residential projects.
- Minimal buffer areas.
- Need for more neighborhood parks, open space, and community centers.
- Need for a trail plan and bikeways.
- Preserve areas of historic, cultural, and scenic significance.
- Preserve wildlife habitats, and ecologically important areas within parks and recreation areas in a natural state.
- Promote landscaping along Dominguez Channel.
- Protect and link open space areas.

Another issue related to land use includes small, homeless encampments, which occur in localized areas under freeway overpasses and in riparian areas. This transient land use is a social concern, and issue for the health of the watershed since these areas typically contribute trash, waste, and debris to habitats and waters.

3.2.6.2 Water Resources

Water Supply

Approximately two-thirds of the water supply used in the Dominguez Watershed is imported, and several of the jurisdictions have expressed concern about diminishing water supply. The following issues and concerns relative to water supply were identified from review of local jurisdictional General Plans and response to questionnaires submitted to jurisdictions to assist with development of this WMMP.

- Conserve domestic water.
- Examine feasibility of alternative water resources (e.g., desalination).
- Maintain an independent water source.
- Minimize surface runoff and allow replenishment of soil moisture.
- Promote water conservation using drought resistant/native plants.
- Protect groundwater from contamination.
- Use reclaimed and recycled water where feasible.

Water Quality

Storm drains, municipal and industrial discharges, land use, and nonpoint source runoff contribute to a variety of water quality impairments in the watershed. Legacy pollutants such as DDT and PCBs also continue to contaminate sediments within water bodies of the watershed. Water quality issues of concern include the following:

- Algae, eutrophication, and odors.
- Bacteria.
- Benthic community degradation.
- DDT, PAHs, PCBs.
- Erosion and sedimentation.
- Metals.
- Pesticides.
- Sediment toxicity.
- Trash.

Another identified issue relative to water quality is monitoring. Water quality monitoring is conducted by a variety of entities associated with NPDES discharge permits, stormwater permits, regional monitoring programs, and/or specialized studies. Lack of standardized methodology, gaps in sampling coverage of the watershed, and lack of any centralized data management or reporting mechanism have limited the availability and use of collected monitoring data for assessing overall watershed health.

Groundwater

Groundwater supply and quality is an important issue for the watershed. Groundwater provides approximately one-third of the water supply used in the watershed. Over pumping of groundwater historically occurred, and replenishment of the groundwater system currently involves injecting a mix of recycled and imported water into the groundwater aquifers to prevent additional seawater intrusion and to augment natural replenishment from regional precipitation and infiltration. Natural replenishment by infiltration and percolation of the Silverado aquifer (which is used for water supply) is not possible because several impermeable layers separate the Silverado aquifer from the ground surface.

Groundwater within the watershed has also been affected to varying degrees by industrial releases of contaminants. Most of the contamination occurs within the Gage Aquifer, which is the shallowest of the four major aquifers that underlie the Dominguez Watershed. Leaching of contaminated groundwater from the Gage aquifer is of concern. Groundwater issues include the following:

- Seawater intrusion.
- Contamination: petroleum hydrocarbons, chlorinated solvents, semi-volatile and volatile organic compounds, PAHs, and metals.
- Leaching of contaminated groundwater.
- Infeasibility of recharging the aquifers used for water supply by percolation
- High cost associated with injection of imported and recycled water into the Silverado aquifer

Flooding

The Dominguez Channel is designed to convey 50-year flood events; therefore, flooding that exceeds the design capacity of the channel would be a rare occurrence. Localized flooding occurs more regularly within several cities of the watershed where the local drainage system is inadequate (see Section 2.3.2.3). Flooding was identified as a concern by the following cities:

- Carson
- Gardena
- Lomita
- Los Angeles (Gaffey Street drain undersized)
- Manhattan Beach
- Torrance

3.2.6.3 Biological Resources

Native habitats constitute approximately 16 percent of the watershed. Most of that (9.5 percent) is associated with the waters of Los Angeles and Long Beach Harbors. Natural habitats on land are localized within the watershed and confined by urban development. The riparian and upland habitats are invaded by non-native exotic and invasive plants in many areas. Active enhancement/restoration efforts are underway in some areas of the watershed, including Gardena Willows, Madrona Marsh, and Linden H. Chandler Preserve.

Despite the fragmented nature and disturbed nature of the natural habitats, the Dominguez Watershed supports several hundred species of wildlife. Several endangered and/or threatened species (5 plants, 7 wildlife) and sensitive species (12 plants, 31 wildlife) are known, or have the potential, to occur within the watershed (see Tables 2.4-1 and 2.4-2).

Issues of concern for biological resources are, as follows:

- Channelization of drainages.
- Exotic, invasive plant species and non-native animals.
- Habitat fragmentation.
- Narrow buffers to urban development.
- Protection of sensitive species and wildlife corridors,
- Sediment contamination and eutrophication contributing to benthic community degradation.
- Trash and debris.

3.2.7 Summary of Issues and Concerns

Key issues, problems, and concerns identified by the LARWQCB, DWAC, general public, and local jurisdictions, and through the watershed background study are summarized in Table 3.2-5. An issue was considered a key concern if it was noted by more than one stakeholder source. Additional issues of concern identified by the different stakeholder sources are listed in the previous subsections.

Table 3.2-5. Summary of key issues, problems, and concerns for the Dominguez Watershed.

Problem, Issue/Concern	LA-RWQCB	DWAC	Focused Workshop	Public Meetings	Questionnaire	Watershed Study Results
Water impairments	√	√	√	√	√	√
Trash on streets and in storm drains and channels	√	√		√		√
Illegal dumping			√	√		
Homeless use areas		√		√		√
Brownfields		√		√		√
Historical DDT and PCB sediment contamination	√	√		√		√
Groundwater contamination and leaching	√			√	√	√
Limited and imported water supply		√		√	√	√
Over-watering of landscaping and yards, need more conservation with drought tolerant plants, recycling		√	√			√
Flooding				√	√	√
Erosion/Sedimentation				√	√	√
Minimal and degraded open space areas		√		√	√	√
Recreation use - limited access to water, open areas, channel		√	√	√		√
Population growth impacts			√	√	√	√
Benthic community degradation	√					√
Habitat degradation and loss		√	√		√	√
Funding		√	√		√	
Need for coordination		√	√			√
Need for regulatory enforcement			√	√		
Need for coordinated, strategic monitoring	√	√		√		√
Public education and involvement in watershed management		√	√	√		√

The following key issues and concerns were identified by most of the sources, and therefore have a very widespread recognition by a diverse range of watershed stakeholders. These major issues and concerns include:

- Water quality impairments.
- Limited water supply.
- Limited open space.
- Population growth impacts.
- Habitat degradation and loss.
- Need for coordinated and strategic monitoring.
- Need for increased public education and involvement in watershed management.

3.3 Goals and Objectives

3.3.1 Goals

The goals for the Dominguez WMMP were developed by the DWAC, and reviewed with other stakeholders during the January 2003 public workshops. The goals are consistent with other regional watershed management goals (e.g., San Diego Basin Plan).

The five goals of the Dominguez WMMP are as follows:

1) Protect and enhance water quality.
2) Conserve, reuse, and recharge water supply.
3) Protect, enhance, and restore native habitats and biological resources.
4) Promote public awareness and involvement in watershed management.
5) Implement stewardship of the watershed and its resources in balance with economic and environmental impacts.

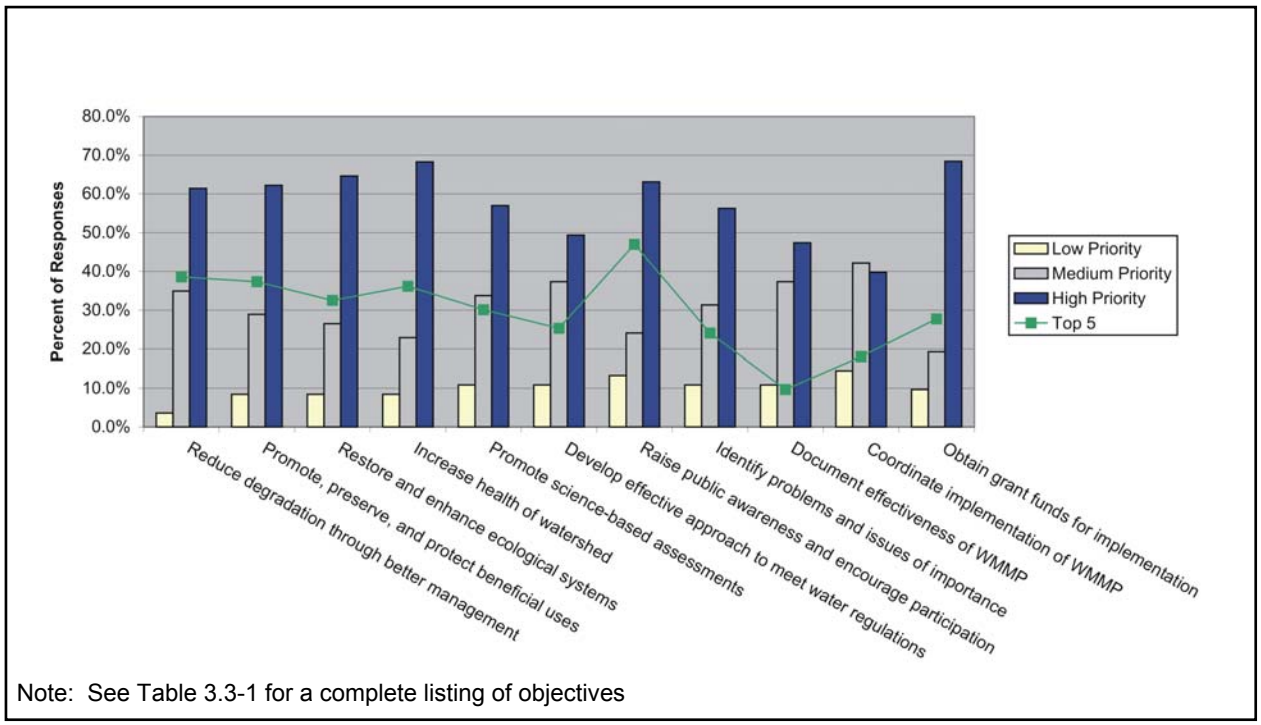
3.3.2 Objectives

Objectives were developed to address the issues, problems, and concerns identified for the watershed as a result of the stakeholder outreach process and the watershed study. In addition, the recommendations and suggestions made by the public during the workshop meetings also were considered. During the January 2003 public meetings, the attendees were asked to prioritize draft objectives that had been developed in coordination with the DWAC. Results of that prioritization are given in Table 3.3-1 and shown in Figure 3.3-1. The assigned priorities for the objectives are shown in Figure 3.3-1. The following objectives were considered of highest priority to address with the implementation of the WMMP.

- Diminish and eliminate further degradation of the watershed and its resources through better management practices.
- Promote, preserve, and protect beneficial uses of the watershed.
- Restore and enhance ecological systems of the watershed.
- Increase the viability, diversity, and health of the watershed.
- Raise public awareness of the Dominguez watershed and encourage participation in management and protection of watershed resources.
- Obtain grant funds to implement watershed improvement projects.

Table 3.3-1. Summary of stakeholder-prioritization of objectives at the January 2003 public meetings.

Objectives	Priority			
	High	Moderate	Low	Top Ranked Objectives
Diminish and eliminate further degradation of the watershed and its resources through better management practices.	√			√
Promote, preserve, and protect beneficial uses of watershed.	√			√
Restore and enhance ecological systems of the watershed.	√			√
Increase the viability, diversity, and health of the watershed.	√			√
Promote science-based methods for water quality and environmental assessment of the watershed.	√			
Develop an effective approach to meeting water quality regulations for the watershed.	√			
Raise public awareness of the Dominguez watershed and encourage participation in management and protection of watershed resources.	√			√
Identify problems and issues of importance to local citizens, groups, and users of the watershed.	√			
Document effectiveness of Watershed Management Plan (WMMP) actions.	√			
Coordinate implementation of WMMP among stakeholders.	√	√		
Obtain grant funds to implement watershed improvement projects.	√			
Write in:				
Protect the Wetlands	√			
Public Health in conjunction with Environmental conservation		√		
Classroom education in watershed issues		√		
Work with various groups already locally promoting water quality such as Audubon	√			
Keep the drains to Dominguez Channel clean	√			
Clean the Dominguez Channel in Carson	√			
Improve aesthetics of Channel		√		
Improve drinking water	√			



Note: See Table 3.3-1 for a complete listing of objectives

Figure 3.3-1. Prioritized objectives identified at public meetings in January 2003.

In addition, meeting participants had the opportunity to write-in additional objectives and/or provide input on the wording of the draft objectives and goals. Several write-in comments were received (see Table 3.3-1). There were no suggested changes to the wording of the goals; however, one of the received comments was that there appeared to be redundancy in the wording of some objectives. These suggestions were reviewed with the DWAC, and some modifications to the final wording of the objectives were made. Changes to the wording of the objectives may not reflect some of the write-in suggestions. This was because the suggestion was considered already addressed in the wording of existing goals and objectives. For example, the suggestion of protecting the wetlands is a subset and therefore covered under the following goal: *Protect, Enhance, and Restore Natural Habitats and Biological Resources*. Some of the other suggestions relate to a type of activity that would be undertaken to fulfill an objective. For example, the suggestion for classroom education in watershed issues would be one of the types of activities that could be undertaken to fulfill the following objective: *Raise Public Awareness of the Dominguez Watershed and Encourage Participation in Management and Protection of Watershed Resources*. Write-in suggestions pertaining to activities that could be undertaken during implementation of the WMMP were taken into consideration in the development of the Action Plan (see Section 4 of this document).

Table 3.3-2 lists the objectives developed for the Dominguez WMMP relative to the five goals of the plan. As can be seen from the table, several of the objectives contribute to the fulfillment of more than one goal. It is recognized that achieving success in fulfillment of the goals and objectives will be expensive for the Dominguez Watershed because of its nearly complete urbanization. Implementation of projects may require demolition and new construction, retrofit of existing infrastructure and systems, and a high degree of coordination to ensure effective implementation. The goal to *Implement Stewardship of the Watershed in Balance with Economic and Environmental Impacts* was developed to provide overarching guidance that funding should be directed towards programs and projects that have the most potential to yield meaningful results and that they be scheduled in a fiscally responsible manner.

Table 3.3-2. Relationship of the objectives to the watershed management goals of the Dominguez Watershed.

Objectives	Goal 1 Protect and Enhance Water Quality	Goal 2 Conserve, Reuse, and Recharge Water Supplies	Goal 3 Protect, Enhance, and Restore Natural Habitats and Biological Resources	Goal 4 Promote Public awareness and Involvement in Watershed Management	Goal 5 Implement Stewardship of the Watershed in Balance with Economic and Environmental Impacts
Promote and protect beneficial uses and eliminate further degradation of the watershed.	√	√	√		√
Increase the viability, diversity, health and function of ecological systems of the watershed.			√		
Promote science-based methods for water quality and environmental assessment of the watershed.	√		√		√
Develop an effective approach to meeting water quality regulations for the watershed.	√				√
Raise public awareness and increase personal stewardship of the watershed.				√	
Involve and encourage public participation in management and protection of watershed resources.				√	
Identify problems and issues of importance to local citizens, groups, and users of the watershed.				√	
Document the effectiveness of Watershed Management Plan (WMMP) actions.				√	√
Coordinate implementation of the WMMP among stakeholders.				√	√
Obtain grant funds to implement watershed improvement projects.	√	√	√		√